

B2 pancreatic amylase promoter; tyrosinase related peptide promoter; tumour rejection antigen precursor promoters.

IN THE CLAIMS:

Please cancel claims 21-40 and substitute therefor the following new claims 41-84:

B7 41. (New) A method for treating cancer comprising administering to a mammal, an effective cancer-treating amount of:

i) at least one vector comprising at least one gene or a part thereof encoding a polypeptide having P450 activity, wherein the expression of the gene or the part thereof is controlled by a promoter sequence, or an effective part thereof, and

ii) acetaminophen.

42. (New) A method according to claim 41, wherein said mammal is human.

43. (New) A method according to claim 41, wherein said vector is a eukaryotic expression vector.

44. (New) A method according to claim 41, wherein said vector is a viral based vector.

45. (New) A method according to claim 44, wherein said viral based vector is a hybrid viral vector.

46. (New) A method according to claim 44, wherein said viral based vector comprises at least one vector based on a virus selected from the group consisting of adenovirus; retrovirus; adeno associated virus; herpes virus; lenti virus, and baculovirus.

47. (New) A method according to claim 41, wherein said promoter comprises at least one promoter selected from the group consisting of TRP-1; HER2; HER3; ERBB2; ERBB3; CEA; MUC1; α -fetoprotein; Rous sarcoma virus long terminal repeat; cytomegalovirus promoter; murine leukemia long terminal repeat; simian virus 40 early and late promoters; herpes simplex virus thymidine kinase promoter; prostate specific antigen promoter (PSA); villin gene promoter;

pancreatic amylase promoter; tyrosinase related peptide promoter, and tumor rejection antigen precursor promoters.

48. (New) A method according to claim 41, wherein said promoter is a hybrid promoter comprising at least effective parts of at least two promoters.

49. (New) A method according to claim 41, wherein said promoter is a tumor-specific promoter.

50. (New) A method according to claim 49, wherein said tumor-specific promoter is selected from the group consisting of TRP-1; HER2; HER3; ERBB2; ERBB3; CEA; MUC1; α -fetoprotein; pancreatic amylase promoter; tyrosinase related peptide promoter, and tumor rejection antigen precursor promoters

51. (New) A method according to claim 41, wherein said promoter is a constitutive promoter.

52. (New) A method according to claim 51, wherein said constitutive promoter is selected from the group consisting of villin gene promoter; Rous sarcoma virus long terminal repeat; cytomegalovirus promoter; murine leukemia long terminal repeat; simian virus 40 early and late promoters; and herpes simplex virus thymidine kinase promoter.

53. (New) A method according to claim 41, wherein said gene encoding a polypeptide having P450 activity is of mammalian origin.

54. (New) A method according to claim 53, wherein said gene encoding a polypeptide having P450 activity is of human origin.

55. (New) A method according to claim 54, wherein said gene encoding a polypeptide having P450 activity is selected from the group consisting of CYP1A2; CYP2E1, and CYP3A4.

56. (New) A method according to Claim 55, wherein the gene encoding a polypeptide having P450 activity is CYP1A2.

57. (New) A method according to claim 53, wherein said gene encoding a polypeptide having P450 activity is of rodent origin.

58. (New) A method according to claim 57, wherein said gene encoding a polypeptide having P450 activity is selected from the group consisting of rodent CYP1A2; rodent CYP2E1, and rodent CYP3A4.

59. (New) A method according to claim 41, wherein said cancer is selected from the group consisting of breast; pancreatic; ovarian; cervical; lung; hepatic; renal; testicular; prostate; gastrointestinal; glioma; melanoma; bladder; lymphoma; leukemia; epithelial, mesothelial, and retinal cancers.

60. (New) A method of treating cancer comprising administering to a mammal, concurrently or in sequence, an effective amount of:

i) at least one vector, capable of transfecting at least one tumor cell, wherein said vector includes at least one P450 gene, or the effective part thereof, the expression of which is controlled by a promoter sequence, or the effective part thereof, which shows substantially tumor cell specific expression;

ii) at least one agent capable of modulating the amount of glutathione in said mammal; and

iii) acetaminophen.

61. (New) The method of claim 60, wherein the vector, agent and acetaminophen one administered sequentially.

62. (New) A method according to claim 60, wherein said agent is at least one substance selected from the group consisting of methionine and acetylcysteine.

63. (New) A composition matter comprising acetaminophen, or a structurally related derivative thereof; and a vector comprising at least one gene or a part thereof encoding a polypeptide having P450 activity, wherein the expression of the gene or the part thereof is controlled by a promoter sequence, or an effective part thereof.

64. (New) A composition according to Claim 63, wherein the promoter sequence shows substantially tumor cell specific expression.

65. (New) A composition according to Claim 63, wherein the vector is a eukaryotic expression vector.

66. (New) A composition according to Claim 63, wherein the vector is a viral based vector.

67. (New) A composition according to Claim 64, wherein the vector is a hybrid viral vector.

68. (New) A composition according to Claim 64, wherein the viral based vector is based on a virus selected from the group consisting of adenovirus; retrovirus; adeno-associated virus; herpesvirus; lentivirus; and baculovirus.

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69. (New) A composition according to Claim 63, wherein said promoter comprises at least one promoter selected from the group consisting of TRP-1; HER2; HER3; ERBB2; ERBB3; CEA; MUC1; α -fetoprotein; Rous sarcoma virus long terminal repeat; cytomegalovirus promoter; murine leukemia long terminal repeat; simian virus 40 early and late promoters; herpes simplex virus thymidine kinase promoter; prostate specific antigen promoter (PSA); villin gene promoter; pancreatic amylase promoter; tyrosinase related peptide promoter, and tumor rejection antigen precursor promoters.

70. (New) A composition according to Claim 63, wherein said promoter is a hybrid promoter comprising at least effective parts of at least two promoters.

71. (New) A composition according to Claim 63, wherein said promoter is a tumor-specific promoter.

72. (New) A composition according to Claim 69, wherein said tumor-specific promoter is selected from the group consisting of TRP-1; HER2; HER3; ERBB2; ERBB3; CEA; MUC1; α -fetoprotein; pancreatic amylase promoter; tyrosinase related peptide promoter, and tumor rejection antigen precursor promoters

73. (New) A composition according to Claim 63, wherein said promoter is a constitutive promoter.

74. (New) A composition according to Claim 73, wherein said constitutive promoter is selected from the group consisting of villin gene promoter; Rous sarcoma virus long terminal repeat; cytomegalovirus promoter;

murine leukemia long terminal repeat; simian virus 40 early and late promoters; and herpes simplex virus thymidine kinase promoter.

75. (New) A composition according to Claim 63, wherein the gene encoding a polypeptide having P450 activity is of mammalian origin.

76. (New) A composition according to Claim 75, wherein the gene encoding a polypeptide having P450 activity is of human origin.

77. (New) A composition according to Claim 76, wherein the the gene encoding a polypeptide having P450 activity is selected from the group consisting of CYP1A2, CYP2E1, and CYP3A4.

78. (New) A composition according to Claim 77, wherein the gene encoding a polypeptide having P450 activity is CYP1A2.

79. (New) A composition according to Claim 63, wherein the gene encoding a polypeptide having P450 activity is of rodent origin.

80. (New) A composition according to Claim 79, wherein the gene encoding a polypeptide having P450 activity is selected from the group consisting of rodent CYP1A2; rodent CYP2E-1; and rodent CYP3A4.

81. (New) A composition according to Claim 63, further comprising at least one agent capable of modulating glutathione level in a mammal.

82. (New) A composition according to Claim 81, wherein the agent is methionine or acetylcysteine.

83. (New) A method for the treatment of cancer, comprising administering to a mammal in need there of an effective cancer treating amount of acetaminophen.

84. (New) A composition according to claim 82, further comprising a pharmaceutically acceptable excipient, carrier or diluent.

85. (New) A method for selectively killing cells in a mammal, the method comprising administering to the mammal, concurrently or in sequence, an effective amount of

i) at least one vector comprising at least one gene or a part thereof encoding a polypeptide having P450 activity, wherein the expression of